

LIMITED PLAY OPTICAL STORAGE MEDIUM, METHOD FOR MAKING THE SAME

ABSTRACT

In one embodiment, a limited play optical storage medium for data comprises: a reflective layer, a control portion comprising an optically transparent polymeric resin and a light absorbing material, wherein the control portion has a light transmission of greater than or equal to about 70% at 650 nm, a curing index of greater than or equal to about 0.1 and a filtration index of greater than or equal to about 2.5, and wherein the light absorbing material has a minimum extinction coefficient (measured in CH_2Cl_2 solution) at 600 nm of greater than or equal to $1,500 \text{ mol}^{-1} \cdot \text{cm}^{-1} \cdot \text{L}$, a maximum extinction coefficient (measured in CH_2Cl_2 solution) at 650 nm of less than about $1,000 \text{ mol}^{-1} \cdot \text{cm}^{-1} \cdot \text{L}$, a ratio of extinction coefficient at 650 nm to 600 nm less than about 0.1, and a reactive layer disposed between the reflective layer and the control portion, wherein the reactive layer is designed to limit the time during which data on the medium (disposed on a side of the reactive layer opposite the control portion), can be accessed after exposure to oxygen.